System Validation Suite

User's Guide

NOS 2.6.1 L700

NOS/VE 1.3.1 L700

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CONTROL DATA PRIVATE

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1.0 INTRODUCTION

The System Validation Suite (SVS) tests CYBER 170/180-800 and 900 Series mainframe hardware features in an operating system environment. The Suite tests the hardware features by executing operating system functions, test jobs, and on-line hardware diagnostics. SVS is designed to be used by the following Control Data organizations.

- Arden Hills and Canadian manufacturing divisions for hardware checkout.
- Product Assurance for mainframe verification.
- Hardware development organizations and Arden Hills Programming Division for configuration management testing.
- Engineering Services for mainframe validation after customer mainframe installation and major FCO installation.

NOTE: SVS is a proprietary package and must only be used by Control Data personnel.

SVS includes the following materials which are delivered when a package is ordered from SMD.

Deadstart Tape(s)
System OPL Tape
Permanent File Dump Tape(s)
User's Guide (this document)

Only one level of SVS is supported at any one time. SMD will always send the latest release level, regardless of the level specified on your order form.

If you wish to use the SVS that is available as part of the NOS/VE Operating System, please consult the SVS/VE User's Guide.

2.0 EQUIPMENT REQUIREMENTS

SVS requires one of the following configurations.

- NOS requires two disk controllers and units, one tape controller, and one 9-track tape unit.

- NOS/VE Dual State requires three disk units*, two disk controllers, an 18002-2 system console, and a 9-track tape unit.

  Two of the disk units and one disk controller are used by NOS. The third disk* and the second controller are used by NOS/VE. The tape unit and associated channel can be used by NOS and NOS/VE.

- NOS/VE Standalone requires one disk unit (two units, if unit type is 834), one disk controller, an 18002-2 system console, and a 9-track tape unit.

*If you are using 834 disks or a dual CPU mainframe with 844 disks, you will need 2 units for NOS/VE for a total of 4 disk units.

NOTE: All disk units must be dedicated to SVS, and are initialized during the testing, i.e., the System Validation Suite cannot coexist with customer permanent files.

The minimum real memory configurations for NOS/VE are listed below. NOS has no restrictions.

System Model	Minimum Memory Size in Megabytes
810A	8
815	8
825	8
830A	8
835	8
840A	16
845	8
850A	16
855	8
860A	16
870A	16
930	8
990E	8
995E	8

3.0 INSTRUCTIONS

There are three modes of operation for SVS. The following information will help you select which mode to use.

SVS/NOS

The SVS/NOS mode executes tests on NOS only for:

- Cyber 170 model 865 and 875 sites.
- Cyber 180 NOS sites.

The materials needed to execute SVS/NOS are:

- NOS Deadstart Tape
- NOS Permanent File Tape (VSN = NSVSPF)
- NOS System OPL Tape (VSN = SVSOPL)

The instructions for SVS/NOS are in section 3.1.

SVS/DM

The SVS/DM mode executes tests on both NOS and NOS/VE for:

- Cyber 180 sites running Dual State.
- Cyber 180 problem debugging. (SVS/DM stresses the system more than the other modes and therefore may more effectively reproduce an intermittent problem)

The materials needed for SVS/DM are:

- NOS Deadstart Tape
- NOS Permanent File Tape (VSN = NSVSPF)
- NOS System OPL Tape (VSN=SVSOPL)
- NOS/VE Deadstart File Tape (VSN = NVEDS)
- NOS/VE Permanent File Tape (VSN = NVESVS)

The instructions for running SVS/DM are in section 3.2.1.

Note: SVS/DM runtime on the model 810 will be close to three hours even though one hour is specified on the initiation commands (NOS: X.RUNSVS(1), VE: ONEHOUR). We have opted to provide a thorough mainframe checkout rather than delete tests to provide a one hour runtime.

SVS/SM

The SVS/SM mode executes tests on NOS/VE only for:

- CYBER 180 NOS/VE sites running a Standalone NOS/VE Operating System.

The materials needed for SVS/SM are:

- NOS/VE Deadstart File Tape (VSN = NVEDS)
- NOS/VE Permanent File Tape (VSN = NVESVS)

The instructions for running SVS/SM are in section 3.2.2.

3.1 NOS INSTRUCTIONS

To deadstart NOS and load permanent files to disk, follow these instructions.

NOTE: SVS assumes you have the correct level of CYBER Initialization Package (CIP) installed on disk. (See Appendix A.)

1. Complete the worksheet provided in Appendix B.

2. Mount the NOS deadstart tape.

3. Initiate deadstart from the CIP disk. The Initial Options display appears.

4. Select "U" - Utilities option from Initial Options display.

5. Select "I" to initialize mainframe.

6. Select "O" - Operator Intervention option from Initial Options display.

7. Verify that title of "O" display is for NOS Deadstart. If not, enter "O".

7A. Select "H" - Hardware Reconfiguration display. Enter "CM=100000". Enter BKSP (to return to the Operator Intervention display).

8. Select "P" - Deadstart Parameters option from Operator Intervention display.

9. Enter "C=nn", where nn=EQPDECK number (Entry number 2 on worksheet).

10. Enter "D=Yes", if D=No.

11. Enter BKSP (to return to the Operator Intervention display).

12. Select "M" to go to the MDD display.
    Enter: MDD = YES
    PORT = 0 or PORT = 1

13. Enter BKSP (to return to the Operator Intervention display).

14. Select "S" - Select Deadstart Device.

15. Select "T" - Operating System Deadstart from Tape option.

16. Enter tape type, channel, equipment, and unit numbers. CMRDECK instructions appear.

17. Enter NEXT. The EQPDECK instructions appear.

18. Press the right blank key. The EQPDECK appears. (The right blank key toggles thru the various EQPDECK displays.) If your disk, tape, or printer equipments are not as defined in the EQPDECK, use the worksheet to modify the EQPDECK at this time.

19. Enter INITIALIZE,AL,5,6,7.

    or INITIALIZE,AL,6,7. if your EQPDECK does not have EQ005.

20. Enter LBC,FM,ch. if your 844 disk units are connected to a 7155-1 or 7155-10 controller.

    or LBC,PH,ch. if your 885-12 disk units are connected to a 7155-401 controller.

21. Enter GO.

22. Enter DATE and TIME, if prompted.

The MAINTENANCE command will be posted in the lower left hand corner of console display. Do not press the left blank key to override the MAINTENANCE command.

23a. For SVS/NOS with no 533/536/537 printer, mount the PFDUMP (VSN=NSVSPF) tape and enter:

X.RUNSVS. (to run one pass.) or

X.RUNSVS(hh) (to run hh hours.)

The amount of time one pass of SVS/NOS executes depends on mainframe type. On an 810 one pass completes in just over an hour, where on the 875 it completes in less than 10 minutes. In most environments in which NOS is used, one hour of NOS run time is sufficient for mainframe verification. Therefore, for 810 mainframes enter X.RUNSVS. For all others enter X.RUNSVS(1).

No further operator input is required.

WARNING Many of the NOS jobs create failures intentionally and post error messages to the system dayfile. Do not be alarmed when you see many error messages on the A display.

23b. For SVS users with a 533/536/537 printer:

o For a 533/536/537 printer connected to a 2550, mount the PFDUMP tape (VSN=NSVSPF), Master Clear the 2550 and then enter:

ON,EQ=60.
X.LOADSVS.

When the permanent file load completes, enter:
NAM.
X.RUNSVS. (to run one pass) or

X.RUNSVS(hh) (to run hh hours).

o For a 533/536/537 printer connected to a CDCNET MTI, mount the PFDUMP tape (VSN=NSVSPF), Master Clear the MTI and then enter:

ON,EQ=65.
X.LOADSVS.

When the permanent file load completes, enter:
X.BEGIN(,SETUPDI,MTI,sysid)
sysid = the last six HEX digits of the 12 digit system identifier, which is on the inside front door of the DI. Note that there are 16 digits on the DI system ID placard. The last 4 digits are NOT part of the system ID.

NAM.
X.RUNSVS. (to run one pass) or

X.RUNSVS(hh) (to run hh hours).

Note: The 533/536 printer must be connected to LIM 0, PORT 1 of the MTI. The 537 printer must be connected to LIM 0, PORT 2 of the MTI.

o For a 533/536/537 printer connected to a CDCNET TDI, mount the PFDUMP tape (VSN=NSVSPF), Master Clear the TDI and the MDI it is connected to, then enter:

ON,EQ=65.
X.LOADSVS.

When the permanent file load completes, enter:
X.BEGIN(,SETUPDI,MDI,sysid)
X.BEGIN(,SETUPDI,TDI,sysid)
sysid = the last six hex digits of the 12 digit system identifier, which is on the inside front door of the DI. Note that there are 16 digits on the DI system ID placard. The last 4 digits are NOT part of the system ID.

NAM.
X.RUNSVS. (to run one pass) or

X.RUNSVS(hh) (to run hh hours).

Note: The 533/536 printer must be connected to LIM 0, PORT 1 of the TDI. The 537 printer must be connected to LIM 0, PORT 2 of the TDI.

3.1.1 Mainframe Information Display

The following mainframe information can be accessed any time during the run:

Model Type
Mainframe Serial number
Number of peripheral processors being used
Total memory size
Central memory size
Extended memory size
User extended memory size
NOS/VE memory size

The mainframe information can be seen by looking at the dayfile of the job which checks the output queue for job failures. To see the dayfile, find the job on the B-display which has "CHECKING FOR FILES." displayed. (On some mainframes, there may be two jobs with this message.) Then locate its jsn (listed under column labelled JSN). Enter DAYFILE,jsn. to see the information.

3.1.2 Test Results

The output from any jobs which fail during the session will print. At the end of the run a RESULTS job will print which will list the names of the failing jobs, if any, or the message "ALL TESTS PASSED" as well as an HPA listing. The message "DONE" is posted to the system dayfile (*A* Display).

If you do not have a local batch printer available you may examine the output files by using the QDSPLAY utility. The steps involved are as follows.

1. Look at the Q,PR. display.

2. Enter QDSPLAY,XXXX. where XXXX is the JSN of an output queue file with ID=0 (blank field under ID heading on Q,PR. display). Failing test jobs and the RESULTS job will have output files with ID=0.

3. Enter L.BOI. to see the output file contents on the console. You may page through the file with L.+. When you are finished enter L.DROP.

For additional information regarding the QDSPLAY utility, see the NOS Version 2 Operator Handbook, CDC Publication 60459310.

3.1.3 Test Restart

To initiate NOS again, enter MAINTENANCE. And, go to Step 23a in Section 3.1.

3.1.4 NOS System Termination

When the Results job has printed, the test is finished. To terminate NOS, enter CHECK POINT SYSTEM. and press the deadstart button.

3.1.5 Utilities

The following utilities facilitate execution of some tests that you may want to run.

X.RUNHPA. NOS runs HPA as part of its post processing. To generate and print an HPA report at your convenience enter: X.RUNHPA. (If the system is very busy, it may take some time for the report generation to complete.)

X.RUNONE(jobname). If there is a failing job that you would like to rerun enter: X.RUNONE(jobname) where jobname is the name of the job to run.

To find the jobname, look at the first line of the job's dayfile, or look in the RESULTS summary report.

X.BEGIN(,STOPSVS). If you would like to terminate the test in the middle of a run and get a results summary enter: X.BEGIN(,STOPSVS)

This may take up to 10 minutes to complete.

X.BEGIN(,RUNKERN). You may run the performance kernels at any time by entering: X.BEGIN(,RUNKERN). The kernel results will print whether or not the job fails.

X.BEGIN(,RUNTIME). If you would like to know at what time the run was started and how long it will execute enter: X.BEGIN(,RUNTIME).

X.LOADSVS. To load the NOS permanent file and OPL tape (VSN=NSVSPF,VSN=SVSOPL) without starting job execution, enter: X.LOADSVS. This is needed if you are using a 533/536 printer, (see Step 23b, Section 3.1) or if you are only testing MAP (see Section 3.1.7.2). or if you are going to execute SVS/DM (see Step 23, Section 3.2.1).

3.1.6 NOS Error Analysis

The type and amount of error information reported to the user when a failure is detected depends on the nature of the error.

1. If the performance kernel (KERNJOB) fails, you have a potential CPU performance problem. To verify, run the kernel utility (X.BEGIN(,RUNKERN)) by itself when NOS has finished executing.

   The test's results will print. Check the output to verify that no failures were reported.

   Note: Failures may occur when running mainframe clock margins.

2. In the event of a fatal hardware error, an Express Deadstart Dump (EDD) must be taken to determine the cause of the error. Consult the CIP User's Guide for EDD instructions.

3. If a MAINTENANCE job fails, its output will print. The output contains diagnostic information useful to a hardware engineer.

4. If a NOS job encounters an error, its output will print. Most likely, the output will contain a dump of the job's field length and error bits in the exchange package. Help from a local software analyst may be needed to interpret the dump.

5. If NOS hangs with "CPUMTR ERROR EXIT", "PP HUNG", "HUNG PP", "NO MONITOR RESPONSE", or blank screens, a system dump must be taken and analyzed. Be sure to record the PP (P,A,Q, and R) register values and save PP0 contents. Consult the CIP Users Guide for Express Deadstart Dump instructions.

When either event 3 or 4 occurs, a hardware problem should be suspected. However, review any Service Bulletins for known NOS problems. Then, if additional help is needed for problem determination, contact the Support Services Organization (SSO) through the World Support Center (1-800-345-9903 for United States and Canadian customers or 1-612-851-4131 for international customers).

3.1.7 Supplementary Peripheral Tests

3.1.7.1 Concurrent Maintenance Library (CML)

CML MALET diagnostics are included on the permanent file dump tapes and additional supporting code on the deadstart tape for your convenience. The diagnostics may be run standalone or while NOS is executing.

The diagnostics are located on UN=CDCCE, PW=CDCCE. Additional CML documentation is contained in the CML Reference Manual.

3.1.7.2 MAP Diagnostics

The MAP device has been defined in the EQPDECK. (The entry is: EQ077=MP,ST=OFF,CH=11.) DO NOT have maintenance jobs running concurrently with the MAP diagnostics. To execute the diagnostics:

1. Turn the MAP device ON: ON,EQ=77.

2. Enter X.LOADSVS if NOS portion of SVS permanent files (VSN=NSVSPF) has not been loaded.

3. Initiate the MSSI subsystem.

   Enter:

   MAPffff.
   where MAPffff is
   MAPECS for a MAP III
   MAPCH for a MAP IV - 20/21
   MAPCMI for a MAP IV - 23/25

4. Initiate the MAP diagnostic AP1.

Enter:

```
K,MAP.
K.DIAG.
```

Additional MAP diagnostics are located on:

UN=CDCCE, PW=CDCCE for MAP III and MAP IV - 23/25

and

UN=CDCCE2, PW=CDCCE2 for MAP IV - 20/21

Enter the following commands to start the additional MAP ECS confidence test:

```
X.DIS.
USER,CDCCE,CDCCE.  (USER,CDCCE2,CDCCE2. for MAP IV - 20/21)
BEGIN,SUB,MSSIP,ECSTEST,2.
DROP.
```

To terminate the ECS test, enter:

```
ONSW,jsn,1.
ONSW,jsn,6.
```

To start three copies of the MAP confidence test, enter:

```
BEGIN,SUB,MSSIP,MAP9V,3.
```

The test will end and say test passed.

These tests may be run together with the AP1 diagnostic or individually. One copy of MAP9V may fail due to hardware status left by AP1 diagnostic.

To stop the MSSI subsystem, enter:

```
K,MAP.
K.ABORT.
```

For additional information, see:

MSSI Version 3 Installation Handbook	60458830
MSSI Version 3 Reference Manual	60458820
Matrix Algorithm Processor III Field Maintenance Manual	60429103
Matrix Algorithm Processor IV	60459900

3.2 NOS/VE INSTRUCTIONS

3.2.1 NOS/VE Dual State Instructions

To initiate NOS/VE Dual State follow these instructions.

NOTE: SVS assumes you have the correct level of CYBER Initialization Package (CIP) installed on disk. (See Appendix A.)

1. Complete the worksheet provided in Appendix B.
2. Mount the NOS deadstart tape.
3. Initiate deadstart from the CIP disk. The Initial Options display appears.
4. Select "U" - Utilities option from Initial Options display.
5. Select "I" to initialize mainframe.
6. Select "O" - Operator Intervention option from Initial Options display.
7. Verify that title of "O" display is for NOS Deadstart. If not, enter "O".
8. Select "P" - Deadstart Parameters option from Operator Intervention display.
9. Enter "C=nn", where nn=EQPDECK number (Entry number 2 on worksheet).
10. Enter "D=Yes", if D=No.
11. Enter BKSP (to return to the Operator Intervention display).

12. Enter "M" to go the the MDD display.

    Enter: MDD=YES
           PORT=0 or PORT=1

13. Enter BKSP (to return to the Operator Intervention display).

14. Select "S" - Select Deadstart Device.

15. Select "T" - Operating System Deadstart from Tape option.

16. Enter tape type, channel, equipment, and unit numbers. CMRDECK instructions appear.

17. Enter NEXT. The EQPDECK instructions appear.

18. Press the right blank key. The EQPDECK appears. The right blank key toggles thru the various EQPDECK displays. If your disk, tape, or printer equipments are not as defined in the EQPDECK, use the worksheet to modify the EQPDECK at this time.

    To utilize the 679, 698, 844, and 885 equipment types for NOS/VE, those equipments must be defined in the NOS Equipment Table and in a "DOWN" state. All other NOS/VE peripheral device types need <u>not</u> be defined in NOS. Care must be taken that none of the NOS equipment is connected to the same channel as a NOS/VE tape or disk equipment.

19. Enter INITIALIZE,AL,5,6,7.

    or INITIALIZE,AL,6,7. if your EQPdeck does not have EQ005.

20. Enter LBC,FM,ch. if your 844 disk units are connected to a 7155-1 or 7155-10 controller.

    or LBC,PH,ch. if your 885-12 disk units are connected to a 7155-401 controller.

21. Enter GO.

22. Enter DATE and TIME, if prompted.

23. Mount the NOS Permanent file tape (VSN = NSVSPF) on a nine track tape drive and load NOS files at this time by entering:

    X.LOADSVS.

24. Enter "X.SETNVE." to initiate the dual state setup job.

25. Mount the deadstart file tape (VSN=NVEDS) on a 9-track tape drive.

26. Enter the NOS console commands:

    IDLE,MAG. to idle the NOS magnetic tape subsystem.
    DOWN,CH=xx. where xx is the tape channel.
    DOWN,EQ=un. where un is the tape unit.

27a. To use a single disk and tape configuration.

    Enter "NVESVSx." where x is the Two Port MUX Port.

    NOS/VE will require that you define the NOS/VE deadstart device (tape drive) and system device (disk) at the NOS/VE BOOT display. These devices then become the "default" NOS/VE configuration. This configuration will be maintained on the CIP device until CIP is re-installed.

27b. To use more than 1 disk or 1 tape equipment (834 equipment type requires 2 units) for NOS/VE.

    Enter "NVEINTx." where x is the Two Port MUX Port

    After the NOS/VE BOOT display and a system core commands display, you will be prompted to enter your full configuration.

28. Press the F7 key.

29. If this is the initial NOS/VE deadstart after CIP installation, you will be prompted to SET_TIME_ZONE, so enter:

```
SETTZ 0
```

30. Follow the directions presented on the System Core Commands display on the 18002-2 console:

```
*                                                    *
*     ENTER THE FOLLOWING SYSTEM CORE COMMANDS       *
*                                                    *
*          INIDD VSN001                              *
*          AUTO                                      *
*                                                    *
```

31. Go to Section 3.2.3 - Test Execution.

3.2.2 NOS/VE Standalone Instructions

NOTE: SVS/SM assumes you have the correct level of CYBER Initialization Package (CIP) installed on disk. (See Appendix A.)

1. Mount the NOS/VE deadstart file tape (VSN=NVEDS).

2. Initiate deadstart from the CIP disk on the 18002-2 console. The Initial Options display appears.

3. Select "U" - Utilities option from Initial Options display.

4. Select "I" to initialize mainframe.

5. Select "O" - Operator Intervention option from Initial Options display.

6. Verify that title of "O" display is for NOS/VE Deadstart. If not, enter "O" to toggle deadstart type.

7. Select "P" - Deadstart Parameters option from Operator Intervention display.

8. Enter "D=20" to use the recommended default disk and tape. If you want to use other equipments than these, specify "D=01", which will invoke an interactive prompt procedure after Step 16.

9. Enter "P=YES" to cause NOS/VE to stop for operator entries.

10. Enter BKSP (to return to the Operator Intervention display).

11. Enter "M" to go the the MDD display.

    Enter: MDD=YES
           PORT=0 or PORT=1

12. Enter BKSP (to return to the Operator Intervention display).

13. Select "S" - Select Deadstart Device.

14. Select "T" - Operating System Deadstart from Tape option.

15. Press the F7 key

16. The NOS/VE BOOT display will appear. This is a menu driven display program. After you have completely defined your NOS/VE deadstart device (tape) and your NOS/VE system device (disk) press the "NEXT" key.

17. If this is the initial NOS/VE deadstart after CIP installation, you will be prompted to SET_TIME_ZONE, so enter:

    SETTZ 0

18. Follow the directions presented on the System Core Commands display on the 18002-2 console:

```
*                                                    *
*     ENTER THE FOLLOWING SYSTEM CORE COMMANDS       *
*                                                    *
*          INIDD VSN001                              *
*          AUTO                                      *
*                                                    *
```

If you selected the "default" configuration DCFILE (D=20) no further information is needed for the NOS/VE deadstart.

If you entered "D=01" at Step 8, then you will be prompted at configuration prolog time to configure additional tape, disk, end network equipments.

3.2.3 NOS/VE Test Execution

1. When the NOS/VE display has a message that states:

```
************************************************** ******
*                                                       *
* Mount the tape "NVESVS" on your configured tape drive  *
*                                                       *
*********************************************************
```

   unload the deadstart tape and mount the permanent file tape labeled "NVESVS".

2. When the Tape is finished loading and the message:

```
************************************************** ******
*                                                       *
* Please type "ESTSE to enter the SVS utility           *
*                                                       *
*********************************************************
```

   is displayed on the NOS/VE console, then type in the command:

   ESTSE

   Over the next few minutes SVS will be defining the tests for subsequent execution.

3. Upon completion of the ESTSE command a help screen will be displayed. At this time you may initiate the testing by entering the command "RUNSVS".
   The format for RUNSVS is as follows:

   RUNSVS FOR (integer) (HOURS,MINUTES, or PASSES)
   RUNSVS UNTIL (integer) (AM, or PM):
   RUNSVS CONTINUOUSLY

   Several examples follow.

```
RUNSVS FOR 72 HOURS    "
RUNSVS UNTIL 8 AM      "  CANNOT EXTEND BEYOND 23 HOURS WITH
                          THIS COMMAND.
RUNSVS CONTINUOUSLY    "
RUNSVS FOR 6 PASSES    "  SPACES ARE SIGNIFICANT IN ALL FORMS
RUNSVS FOR 90 MINUTES  "  OF THE COMMAND
RUNSVS FOR 1 HOUR      "
```

4. If you want to run SVS/DM (dual state) enter on the NOS console the following commands:
   MAINTENANCE.
   X.RUNSVS(hh,RUNKERN=N) (to run hh hours)

3.2.4 Test Results

When testing is complete, the bottom window of the console will display either PASSED or FAILED in large block letters. HPA/VE will automatically run to report any intermittent or corrected hardware failures. Additionally, if any SVS test failures have occurred, job logs and/or job test case failure data will be printed. If you have a printer available, enter:

```
ON_PRINTER
```

If you are running SVS/DM and your printer is conncted directly to NOS/VE enter:

```
ON_PRINTER VE
```

If your printer is connected to your mainframe via CDCNET then you should master clear your CDCNET equipment and follow the directions issued by ON_PRINTER. You will be prompted for printer information which includes DI Equipment type, DI serial number, and printer type.

If a printer is not available, you may transfer output files to tape or examine the files at the console using SVS commands. See Section 3.2.8 for additional information.

3.2.5 Test Restart

To initiate further NOS/VE testing, go to Step 3 in section 3.2.3.

3.2.6 NOS/VE System Termination

When testing is finished, enter TERMINATE_SYSTEM to gracefully halt the system.

3.2.7 NOS/VE 18002-2 Console Operation

The NOS/VE console can be divided into windows. After NOS/VE deadstart there will be three windows: the NOS/VE SYSTEM HEADER, the OPERATOR ACTION DISPLAY, and the MAIN OPERATOR WINDOW. A window can be an input or sharing window. An input window will allow operator entry and a sharing window will beep if the cursor is positioned to it and input is attempted. The keys that can be used for screen control are:

o TAB	The large "L" shaped key in the upper left, will position the cursor to the input lines at the various windows being displayed.
o SUPER	Will expand the window the cursor is presently pointing at.
o BACK	Will return the window the cursor is presently pointing at to its previous condition.
o PAGE CLEAR	Will reprint the display should the display appear to be hung.
o Clear to EOL	Will erase the current input line.

Here are some NOS/VE operator commands that will help to monitor test execution:

- o VED AJ — Open a sharing window in the middle of the screen to show all active jobs.
- o VED MS — Open a sharing window in the middle of the screen or replace the current window with information on the available disk space.
- o VED DS
- o DISAO — Display the NOS/VE output queue contents.
- o DISAI — Display the NOS/VE input queue contents.

3.2.8 Additional SVS Commands

Type in DISCI (command_name) to see parameters for commands listed below.

- o FAILURES — Displays testcase failure data.
- o HELP — Displays a list of available SVS commands.
- o ON_PRINTER — Establishes printing capability.
- o PRINT_HISTORY — Places a copy of the HISTORY file in the output queue. The HISTORY file is where NOS/VE SVS places the machine descriptor information, all testing results, any error information, and a results summary.
- o RESET_HISTORY — Creates a new history file. Enter this command before restarting a test session to clear the file.
- o RUNHPA — Processes the Engineering logs and generates HPA/VE report at your convenience.
- o SCAN_HISTORY — Displays a history file containing all test session results since deadstart or a RESET_HISTORY command.

- o RUN_MST — Runs the VE MST test on drive with specified VSN. The VSN of a drive may be obtained from the VED DS display.
- o SCAN_OUTPUT_QUEUE — Displays an output queue file. For scrolling control with a PC console use "Cntrl S" and "Cntrl Q". With all other consoles use the SETUP AND F1 keys.
- o TERMINATE — Prematurely terminates a SVS testing session.
- o QUIT — Exits from the SVS utility.

Use these commands to move output files to a different mainframe with a printer.

- o DUMP_OUTPUT_QUEUE — Dumps output queue files to tape.
- o RESTORE_OUTPUT_QUEUE — Restores output queue files from tape.

All NOS/VE system commands are available at any time.

3.2.9 Abnormal NOS/VE System Termination

If NOS/VE hangs, a system dump should be taken and analyzed. A hardware problem should be suspected. Further analysis of a hardware problem should be done using on-line and off-line diagnostics. However, Service Bulletins should be reviewed for known NOS/VE problems.

If additional help is needed to determine cause of a failure, contact the Support Services Organization (SSO) through the World Support Center (1-800-345-9903 for United States and Canadian customers or 1-612-851-4131 for international customers).

If the NOS/VE dual state system appears to be hung, do the DROPVE step. If the NVE control point in NOS says NVE is down go to step 2.

1. DROPVE. — Will cause NOS/VE to terminate. (You must have the keyboard in UNLOCK mode before this command is legal.)
2. Either — K.*RUN. The NVE job on NOS will request a tape for a dump. Mount a tape and type "ASSIGN,NVE,est." When the dump is complete, NOS/VE will attempt to redeadstart and build a recovery file. Type "AUTO" on the NOS/VE console at SYSTEM CORE COMMANDS display to reinitiate NOS/VE.

```
or          K.*DUMP=NO.   To allow the NVE job on NOS to
            K.*RUN.       terminate without a dump.
```

3. NOS/VE can be re-deadstarted after control point 2 is idle. (See either section 3.2.1 or 3.2.2.)

4. It is normal for the PASSON job to abort and print out when NOS/VE is terminated.

5. Run HPA to report any intermittent or corrected hardware errors.

   Enter:
   X.RUNHPA.

3.2.10 NOS/VE Dump Processing

If you have an EDD dump of a NOS/VE failure and wish to process under NOS/VE, on the NOS/VE console, enter:

```
PROCESS_DUMP evsn      Where evsn is a six character tape vsn.
ASSD TAPE evsn         To assign the dump tape.
```

If you have a K.*RUN dump (See Section 3.9.2 Step 2) or an EDD dump of a failure and wish to process it under NOS with DSDI, execute these steps:

1. Mount the dump tape on a tape drive.

2. Enter E,T. and note the tape vsn for the dump tape. If you have an unlabeled tape enter "VSN,est,DUMP."

3. Enter "X.MFGDUMP(vsn,type,labeled,density)"

   vsn = the EDD vsn shown on the E,T. display.

   type = "ONECPU", "TWOCPUS", or "NOSDMP".
   (see below)

   labeled = "KL" for labeled or
   "KU" for unlabeled tapes.

   density = "PE" for 1600 BPI or
   "GE" for 6250 BPI.

TYPE "ONECPU" or "TWOCPUS" will give you a 180 side dump of:

Processor registers, the NOS/VE system level, the Halt cause message, job exchange package and stack traceback, memory contents around JPS "A" registers, machine instructions around JPS "P", Monitor exchange package and traceback, memory contents around MPS "A" registers, machine instructions around MPS "P", various NOS/VE operating system tables.

TYPE "NOSDMP" will give you a 170 side dump of:

all NOS control points, all peripheral processors.

EXAMPLES:

```
X.MFGDUMP(EDD10A,ONECPU,KL,PE) - EDD 180 side 1600 BPI.
X.MFGDUMP(DUMP,TWOCPUS,KU,GE) - K.*RUN 180 side 6250 BPI.
X.MFGDUMP(EDD10A,NOSDMP,KL,GE) - EDD NOS side 6250 BPI.
X.MFGDUMP(DUMP,NOSDMP,KU,PE) - K.*RUN NOS side 1600 BPI.
```

WARNING: For systems with large memories, the following restrictions exist.

- 128 MB system memory dumps require either 2 2400 ft. reels or one 3600 ft. reel at 6250 bpi.
- 128 MB (300-500 tracks) of disk space available on your NOS disks for dump processing using MFGDUMP.
- Dumps for systems greater than 64 megabytes cannot be processed on an 844 disk device.

3.2.11 Notes & Cautions

1. In SVS/DM your CIP device MUST be a NOS device. NOS/VE will hang during deadstart with SDA hung on a channel request for a downed channel if the CIP device is a NOS/VE disk.

2. The NOS/VE SVS display update time varies with machine type and test load. The default time is five minutes.

3. When running a Dual CPU 830 on two ISD's, messages about OUT OF SPACE or VSN001 LOW ON SPACE may be displayed. As long as the system is updating the display time and percent of CPU (PC), these messages can be ignored.

4. DVS test RFST, BIMM and DBUG fail on a 835 machine. The tests will not be executed on this machine.

5. DVS test NUMR takes longer then 1.5 hours on an 860, so it is not included as part of the automated SVS run. If your site is experiencing unusual BDP problems you may want to add the NUMR test via the ADD_TEST SVS command.

6. If you have disk or tape equipment on channel 11 or channel 6 that you intend to use for NOS/VE, be sure to delete all entries from the NOS EQPDECK at deadstart or NOS/VE will not be able to get the channel from NOS.

4.0 PROBLEM REPORTS

If you discover a problem with SVS, please document it on a software Problem Status Report (PSR). Among the required PSR information, specify the NOS release level and the NOS/VE release level (printed on the front of this document), the product name of 'SVS', and the problem description. Submit an on-line PSR via SOLVER, or send a PSR form according to the normal PSR procedures printed on the back of the PSR form.

Please attach a copy of the deadstart worksheet (Appendix B) to the PSR form.

APPENDIX A - FCA LEVELS SUPPORTED

This SVS package is certified at the following FCA (Field Change Announcement) levels:

MODEL	FCA LEVEL
810A	7 w/CIP V9 L700
815	10 w/CIP V9 L700
825	11 w/CIP V9 L700
830A	7 w/CIP V9 L700
835	11 w/CIP V9 L700
840A	7 w/CIP V9 L700
845	10 w/CIP V9 L700
850A	7 w/CIP V9 L700
855	13 w/CIP V9 L700
860A	7 w/CIP V9 L700
870A	7 w/CIP V9 L700
875	1 w/CIP V9 L700
990E	14 w/CIP V9 L700
995E	14 w/CIP V9 L700

APPENDIX B - DEADSTART WORKSHEET

This worksheet is provided to help you with the NOS and NOS/VE configuration definition steps required during operating system deadstart. NOS has configuration definitions for both hardware and software which are resident in the CMRDECK, EQPDECK, IPRDECK, and LIBDECK. All the decks contain information which the software uses to determine table sizes, job priorities, routine residence, etc. The only decks you will need to modify for this package are the CMRDECK and EQPDECK. Together they define how the memory will be divided between the two operating systems and the peripheral equipment configurations available to each system.

CMRDECKs and EQPDECKs are provided on the deadstart tape for various mainframe memory sizes and disk types. It is important that you select the CMRDECK and EQPDECK which most closely match your machine's memory size and peripheral configuration. (Make sure you use the correct appendix. Use Appendix F for SVS/DM.) The CMRDECKs and EQPDECKs were created using the CDC recommended channel assignments. All new mainframes should be installed using these channels. However, if the site you are working on is configured differently, the following instructions will help you modify the EQPDECK.

1. Provide the following information:

   Machine Type _____ S/N _____ # of PPs _____ Memory Size _____

   NOS Disk Device Type _____ Channels _____ Units _____

   NOS/VE Disk Type _____ Channel _____ Unit _____

   NOS/VE Disk Controller Type _____ . (e.g. 7155-1)

   Tape Type _____ Channel _____

   Printer Type _____ Train Type _____ Channel ___ Equipment __

2. Use the above information to select the appropriate CMRDECK and EQPDECK from the Configuration Matrix in Appendix D, E, or F. If you are using Appendix F, and you are mixing disk device types, pick an EQPDECK to match your NOS disk type.

   A few sample EQPDECKs are provided in Appendix G, if you wish to see what an EQPDECK looks like before you deadstart.

   EQPDECK # Selected _____.

3. Deadstart the mainframe with the EQPDECK you have selected. Use the comments in the EQPDECK and the information that follows to change EQPDECK entries to match your system physical configuration. Record your new entry in the spaces below, for each entry that you need to change.

   Ensure that your memory size matches the deck's. If not, reselect the correct deck. Appendix C defines the memory entries and explains how they are used by the operating systems.

4. Compare your recorded disk data from above with the EQPDECK data. If the equipment TYPE is different, locate the disk device type which applies to your equipment type in the table below. You will need to specify the NOS Device Type in your new EQPDECK entry.

Equipment ID	NOS Device Type
834	DD
836	DG
844-21	DK (Not supported by NOS/VE)
844-41	DL
885-1x	DQ
885-42	DB (Not supported by NOS/VE)
887	DF
895	DC

EQPDECK entries EQ006 and EQ007 are for NOS and EQ010 and EQ011 are for NOS/VE. (834(DD), 836(DG), 887(DF), or 895(DC) equipment does NOT have to be defined in the EQPDECK to be used by NOS/VE).

844, 885-4, 887, 895 entries:

```
EQ006=device-type,UN=unit,CH=ch#1/ch#2.
EQ007=device-type,UN=unit,CH=ch#2/ch#1.
```

Note: ch#1 and ch#2 are reversed between the two entries to get better channel utilization and faster unit access.

834 entries:

```
EQ006=DD,UN=unit.
EQ007=DD,UN=unit.
EQ020=CM,CW=CM,EQ=equipment,CH=ch#1,ch#2.
EQ021=CM,CW=CM,EQ=equipment,CH=ch#1/ch#2.
```

836 entries:

```
EQ006=DG,UN=unit.
EQ007=DG,UN=unit.
EQ020=CM,CW=C2,EQ=equipment,CH=ch#1,ch#2.
EQ021=CM,CW=C2,EQ=equipment,CH=ch#1/ch#2.
```

Note: 834 or 836 Control Module channel definitions can not be reversed. Channel 0 is usually the first 834 channel and must always be specified in the ch#1 position.

New EQPDECK entries:

EQ006=_____ .
EQ007=_____ .

and if applicable:

EQ020=_____ .
EQ021=_____ .

If you have changed a NOS device type, you must re-enter all EQPDECK entries that refer to that device.

EQ006	EQ007
SYSTEM=6.	FAMILY=7.
MSAL,T=6,7.	MSAL,T=6,7.
MAINLOG=6,200.	PF=7,F,377,377,NSVSPF,7.
PF=6,F,,,NSVSPF,6.	

EQPDECK entries EQ010 and EQ011 are for NOS/VE. The SVS package states that only a single disk is required for NOS/VE. Two are provided in the EQPDECK to provide some flexibility in unit selection and to reduce the number of EQPDECKs required to allow that flexibility.

*NOTE: 834, 836, 887 and 895 devices for NOS/VE must NOT be defined in the NOS EQPDECK. You must be sure that the channels and equipment you intend to use for NOS/VE are not defined for NOS in any of the EQPdeck entries, even the devices with ST=OFF. If you have selected a deck with EQ010 or EQ011 entries enter EQ010=. and EQ011=. to eliminate them.

844 & 885-1x entries:

EQ010=device-type,UN=unit,CH=ch,ST=DOWN.
EQ011=device-type,UN=unit,CH=ch,ST=DOWN.

NOTE: Always ensure that the equipment you are not using for NOS/VE is eliminated by a EQ10=. or EQ11=.

If you changed the device type on either entry you must re-enter the following commands.

REMOVE=10. or REMOVE,11.

NEW NOS/VE DISK ENTRIES:

EQ010=_____
EQ011=_____

REMOVE=_____.

**NOTE: 895 UNIT NUMBERS FOR NOS/VE: The unit number for the 895 disk on a NOS/VE configuration is defined as follows:

SHUUUU (2) where S = STORAGE DIRECTOR (0 or 1)
H = HEAD OF STRING (0 or 1)
UUUU = UNIT (0 - 1F(16))

NOS unit 40(8) is then STORAGE DIRECTOR 1 UNIT 0. But on NOS/VE all units must be referred as a decimal integer. So you will have to convert any NOS 895 equipment numbers to their NOS/VE equivalent.

5. Compare the magnetic tape data. The EQPDECK entries for tape equipment differ depending upon your NOS disk device types. All decks with ISD disk device type have ISMT and ATS tape equipment entries.

```
EQ50=NT-2,CH=ch#1.
```

New entry: EQ50=_____

For ISMT (639) tapes use the following example.

```
EQ40=NT,EQ=eq,UN=unit,CH=ch#1,TF=IST,ST=ON.
```

For Hitachi (698) tapes use the following example.

```
EQ50=NT-2,EQ=eq,UN=unit,CH=ch#1,TF=CMTGE,ST=ON.
```

6. Compare the line printer data.

If you are running SVS/DM, NOS/VE output requires a train type of 6 or 7; 7 is default in the decks. NOS also supports train types of 6 and 7. If your configuration differs from the EQPDECK entry, change the entry according to the following definition.

```
EQ30=ptype,EQ=eq#,CH=ch#,TN=train.
     ptype = LP for 512
             LR for 580-12 (LR-P for programmable format)
             LS for 580-16 (LS-P for programmable format)
             LT for 580-20 (LT-P for programmable format)

     train = 1 for CDC graphic 63/64 character set
                 (default)
             5 for ASCII graphic 63/64 character set
             6 for ASCII graphic 95 character set
             7 for ASCII graphic 95 character set used as
                 an ASCII graphic 63/64 character set.
```

New entry: EQ30=_____

7. Note the entries which are turned OFF. NOS will ignore these entries as long as they remain OFF.
The two-port mux entry allows you to execute Remote Diagnostic Facility (RDF). (No entry is required for MDD.)
The MAP entry allows you to verify the MAP hardware using CML.
If you are using the 533/536 printer, it is necessary to turn on the entry for the appropriate network device. You will have a 2551 or a DI. The entry for the 2551 looks like this:

EQ64=NP,ST=OFF,EQ=7,PI=1,SA=OFF,CH=7,ND=1.

The hardware definition parameters are EQ and CH.

The EQ parameter is the controller number which should be set to 7.

The channel number may be changed from 7 as follows:

EQ064=NP,CH=channel #.

Also required:
- 65K minimum 2551 memory size
- 1 coupler (channel board) on NPU
- 1 2561 CLA installed in rightmost slot, configured 01 and switched on
- 1 hardwire cable (P/N 21937629B)

The entry for a DI looks like this:

EQ65=ND,ST=OFF,EQ=0,PI=1,NT=77,CH=7,ND=64.

The only entry you may need to change is the channel number, which can be changed as follows:

EQ65=ND,CH=channel #

Also required:
- Printer cabled to LIM 0, port 1 with hardwire cable (P/N24612710).

** NOTE - If you intend to use a channel for NOS/VE utilized by any of the NOS equipments (even if they are turned off), delete the entry or NOS/VE will not be able to get that channel.

APPENDIX C - MEMORY ALLOCATION MATRIX

This appendix is provided to describe how the various memory definitions relate to each other and how they are used by NOS and NOS/VE.

NOS and CIP use octal memory values. The following table provides octal equivalences to decimal word and megabyte values.

Megabyte Size	Approximate Decimal Representation	Octal Representation	CIP CM Value
2	262K	1,000,000	10,000
4	512K	2,000,000	20,000
6	750K	3,000,000	30,000
8	1000K	4,000,000	40,000
12	1500K	6,000,000	60,000
16	2000K	10,000,000	100,000
32	4000K	20,000,000	200,000
64	8000K	40,000,000	400,000
96	12000K	60,000,000	600,000
128	16000K	100,000,000	1,000,000

CIP memory entry on Hardware Reconfiguration display (CM=n.) is physical memory size in octal divided by 100(8).

CMRDECK entries:

MINCM is minimum NOS memory size in octal divided by 100(8).

VE is NOS/VE memory size in octal divided by 1000(8).

EQPDECK entries:

UEM size (EQ005=DE) is size of NOS extended memory in octal divided by 1000(8).

(Physical memory size = NOS memory size + VE memory size + UEM size + page table length + Environment Interface size.)

APPENDIX D - NOS EQPDECKS FOR 865 OR 875 DIRECTORY

EQPDECKS DIRECTORY

```
CMRD00
* DIRECTORY * 08/12/87 *
*
*TABLES ARE PROVIDED HERE TO HELP YOU SELECT WHICH
*CONFIGURATION DECKS TO USE FOR THE SYSTEM VALIDATION SUITE.
*
*THESE DECKS FOR 865/875 MAINFRAMES HAVE TWO DISK CHANNELS
*(CH1 AND 2) TO TWO DISK UNITS (844 USE UNITS 0 AND 1,
*885 USE UNITS 40  AND 41),  67X TAPE DRIVES (CH13),
*580 PRINTER (CH12, EQ5), AND A 2551 NPU (CH7, ND1).
*
*TABLE SIZES IN THE CMRDECK VARY ACCORDING TO MEMORY SIZE.
*MAIN MEMORY AND ESM SIZES ARE GIVEN IN 60-BIT WORDS.
*
* DECK
* NUMBER
*-------------------------------------------
** 00    DIRECTORY
*
*       MEMORY SIZE      ESM SIZE       DISK
*       ---------------------------------------
*  01       262K                        844
*  02                                   885-12
*
*  03       512K                        844
*  04                                   885-12
*
*  05      1000K                        844
*  06                                   885-12
*
*  07      2000K                        885-12
*
*  10       262K           1000K        844
*  11                                   885-12
*  12                                   885-42
*  13                      2000K        844
*  14                                   885-12
*  15                                   885-42
*
*  16       512K           1000K        844
*  17    OR MORE                        885-12
*  20                                   885-42
*  21                      2000K        844
*  22                                   885-12
*  23                                   885-42
*
** 24    UNCONFIGURED DECK
```

APPENDIX E - NOS EQPDECKS FOR OTHER THAN 865 OR 875 DIRECTORY

EQPDECKS DIRECTORY

```
CMRD00
* DIRECTORY *  3/10/88 *
*
*TABLES ARE PROVIDED HERE TO HELP YOU SELECT WHICH
*CONFIGURATION DECKS TO USE FOR SVS/NOS.  SVS/DUAL MODE
*DECKS ARE ON CMRD 34.
*
*DECKS 1-15 ARE FOR THE CYBER 180-810/830.  SEE THE
*TABLE FOR DISK, TAPE AND PRINTER EQUIPMENT INFORMATION.
*EACH DECK HAS A 2551 NPU CONFIGURED ON CHANNEL 7, NODE 1.
*AND A CDCNET DI ON CHANNEL 7.  YOU MAY USE EITHER.
*
*THE DECKS FOR ALL OTHER MAINFRAMES HAVE TWO DISK CHANNELS
*(CH1 AND 2) TO TWO DISK UNITS (844/895--UN 0 AND 1, 885--
*UN 40  AND 41),  67X TAPE DRIVES (CH13),  PRINTER (CH12,
*EQ5), A 2551 NPU (CH7, ND1), AND A NETWORK DI (CH7).
*
*TABLE SIZES IN THE CMRDECK VARY ACCORDING TO MEMORY SIZE.
*MAIN MEMORY AND ESM SIZES ARE GIVEN IN 60-BIT WORDS.
*
* DECK
* NUMBER
*-------------------------------------------------
** 00    DIRECTORY
*
*           ********810/830 DECKS********
*
*       MEMORY SIZE  MAG TAPE     DISK         PRINTER
*       ---------------------------------------------
*  01      262K         639         834  1CM     *1*
*          (2MB)       (CH6)   (CH0,UN0,1)
*  02                   639         836  1CM      *1*
*                      (CH6)   (CH0,UN0,1)
*  03                   639         834  2CM      *1*
*                      (CH6)   (CH0/20,UN0,1)
*  04                   639         836  2CM      *1*
*                      (CH6)   (CH0/20,UN0,1)
*  05      512K         639         834           *1*
*          (4MB)       (CH6)   (CH0/20,UN0,1)
*  06                   639         836           *1*
*                      (CH6)   (CH0/20,UN0,1)
*  07                   679         885           580
*                      (CH31)  (CH1/3,UN40,41)  (CH12,EQ5)
*  10      1000K        639         834
*          (8MB)       (CH6)   (CH0/20,UN0,1)     *1*
*  11                   639         836
*                      (CH6)   (CH0/20,UN0,1)     *1*
*  12                   679         885           580
*                      (CH31)  (CH1/3,UN40,41)  (CH12,EQ5)
*  13      2000K        639         834
*          (16MB)      (CH6)   (CH0/20,UN0,1)     *1*
*  14                   639         836
*                      (CH6)   (CH0/20,UN0,1)     *1*
*  15                   679         885           580
*                      (CH31)  (CH1/3,UN40,41)  (CH12,EQ5)
*
*NOTE *1*. THESE DECKS CONTAIN NO PRINTER ENTRY.  CYBER
*SUPERMINI PRINTER (533/6) IS CONNECTED VIA THE NETWORK.
*
*  **DECKS FOR ALL MAINFRAMES BUT 810/830 AND 865/875**
```

	MEMORY SIZE	DISK
16	262K (2MB)	844
17		885-12
20	512K (4MB)	844
21		885-12
22		895
23	1000K (8MB)	844
24		885-12
25		895
26	2000K (16MB)	885-12
27		895
30		887
31-33	UNCONFIGURED DECKS	

****

APPENDIX F - SVS/DM EQPDECKS DIRECTORY

EQPDECKS DIRECTORY

```
EQPD34
*DIRECTORY                    10 MARCH 1988
*
*
*  895 BUFFER SPACE ENCLOSED IN PARENTHESES
*
*  CMR  CHS    CTI    NOS    UEM     VE     MASS
*  NO.  CONF    CM    MINCM   XM     MEM    STORAGE
* ----- ----  -----  -----  ----   -----   (BUFFER)
*  34       THIS DIRECTORY
*  35   0/20   40000  4000    200   3000   834/NONE
*  36   0/20   40000  4000    200   3000   836/NONE
*  37    1/2   40000  4000    200   3000   844
*  40    1/2   40000  4000    200   3000   885
*  41   0/20  100000 30000   1000   3746   834/NONE
*  42   0/20  100000 30000   1000   3746   836/NONE
*  43    1/2  100000 30000   1000   3746   844
*  44    1/2  100000 30000   1000   3746   885
*  45    1/2  100000 20000   2000   3600   895(1000)
*  46    1/2  100000 20000   2000   3600   887(1000)
*  47   0/20  200000 30000   1000  13600   834/NONE
*  50   0/20  200000 30000   1000  13600   836/NONE
*  51    1/2  200000 30000   1000  13600   844
*  52    1/2  200000 30000   1000  13600   885
*  53    1/2  200000 20000   2000  13600   895(1000)
*  54    1/2  200000 20000   2000  13600   887(1000)
*  55   0/20  300000 30000   1000  23600   834/NONE
*  56   0/20  300000 30000   1000  23600   836/NONE
*  57    1/2  300000 30000   1000  23600   844
*  60    1/2  300000 30000   1000  23600   885
*  61    1/2  300000 20000   2000  23600   895(1000)
*  62    1/2  300000 20000   2000  23600   887(1000)
*  63   0/20  400000 30000   1000  33600   834/NONE
*  64   0/20  400000 30000   1000  33600   836/NONE
*  65    1/2  400000 30000   1000  33600   844
*  66    1/2  400000 30000   1000  33600   885
*  67    1/2  400000 20000   2000  33600   895(1000)
*  70    1/2  400000 20000   2000  33600   887(1000)
*  71    1/2 1000000 30000   1000  53600   844
*  72    1/2 1000000 30000   1000  53600   885
*  73    1/2 1000000 20000   2000  53600   895(1000)
*  74    1/2 1000000 20000   2000  53600   887(1000)
*  75    1/2 2000000 30000   1000  73600   885
*  76    1/2 2000000 20000   2000  73600   895(1000)
*  77    1/2 2000000 20000   2000  73600   887(1000)
```

IRD34
AME=CY180-800 SVS DUAL STATE 34.
ERSION=VSNLINE.

10 MARCH 1988

SELECT THE CMRDECK NUMBER THAT MATCHES THE TOTAL MEMORY REQUIRED AND THEN THE DISK TYPE YOU WISH TO USE.

IF ONLY A SINGLE DISK TYPE IS LISTED IN THE TABLE THE EQPDECK HAS THAT DEVICE TYPE FOR NOS AND NOS/VE.

MULTIPLE DISK TYPES LIST NOS TYPE FIRST AND THEN NOS/VE.

NO EQPDECK ENTRIES ARE NEED TO USE ISD DEVICES ON NOS/VE.

IF YOU ARE GOING TO CHANGE/MIX DISK TYPES, SELECT FOR YOUR NOS DISK TYPE (FEWER ENTRIES REQUIRED FOR NOS/VE DISK)

CMR NO.	CH CONF	TOTAL MEM	NOS MEM	UEM MEM	VE MEM	MASS STORAGE TYPE
34	THIS DIRECTORY					
35	0/20	8MB	1.5MB	.5MB	6MB	834/NONE
36	0/20	8MB	1.5MB	.5MB	6MB	836/NONE
37	1/2	8MB	1.5MB	.5MB	6MB	844
40	1/2	8MB	1.5MB	.5MB	6MB	885
41	0/20	16MB	6MB	2MB	8MB	834/NONE
42	0/20	16MB	6MB	2MB	8MB	836/NONE
43	1/2	16MB	6MB	2MB	8MB	844
44	1/2	16MB	6MB	2MB	8MB	885
45	1/2	16MB	4MB	4MB	8MB	895/NONE
46	1/2	16MB	4MB	4MB	8MB	887/NONE
47	0/20	32MB	6MB	2MB	24MB	834/NONE
50	0/20	32MB	6MB	2MB	24MB	836/NONE
51	1/2	32MB	6MB	2MB	24MB	844
52	1/2	32MB	6MB	2MB	24MB	885
53	1/2	32MB	4MB	4MB	24MB	895/NONE
54	1/2	32MB	4MB	4MB	24MB	887/NONE
55	0/20	48MB	6MB	2MB	40MB	834/NONE
56	0/20	48MB	6MB	2MB	40MB	836/NONE
57	1/2	48MB	6MB	2MB	40MB	844
60	1/2	48MB	6MB	2MB	40MB	885
61	1/2	48MB	4MB	4MB	40MB	895/NONE
62	1/2	48MB	4MB	4MB	40MB	887/NONE
63	0/20	64MB	6MB	2MB	56MB	834/NONE
64	0/20	64MB	6MB	2MB	56MB	836/NONE
65	1/2	64MB	6MB	2MB	56MB	844
66	1/2	64MB	6MB	2MB	56MB	885
67	1/2	64MB	4MB	4MB	56MB	895/NONE
70	1/2	64MB	4MB	4MB	56MB	887/NONE
71	1/2	96MB	6MB	2MB	88MB	844
72	1/2	96MB	6MB	2MB	88MB	885
73	1/2	96MB	4MB	4MB	88MB	895/NONE
74	1/2	96MB	4MB	4MB	88MB	887/NONE
75	1/2	128MB	6MB	2MB	120MB	885
76	1/2	128MB	4MB	4MB	120MB	895/NONE
77	1/2	128MB	4MB	4MB	120MB	887/NONE

APPENDIX G - SAMPLE EQPDECKS

EQPDECKS

```
EQPD36
* COPYRIGHT CONTROL DATA 1986, 1987, 1988
*
* NOS USER EXTENDED MEMORY
*
XM=01,,200,EM.              NOS UEM ENTRY FOR MACHINES WITH 8MB OF MEMORY
UEMIN.
*
* NOS SYSTEM DISK
*
EQ006=DG,UN=00.             836 DISK FOR USE BY NOS
SYSTEM=6.
MSAL,T=6.
MAINLOG=6,200.
PF=6,F,,,NSVSPF,6.
*
* NOS SYSTEM DISK
*
EQ007=DG,UN=10.             836 DISK FOR USE BY NOS
FAMILY=7.
PF=7,F,377,377,NSVSPF,7.
*
* NOS ISD CONTROL MODULES
*
EQ020=CM,CW=C2,CH=0/20,EQ=0.
EQ021=CM,CW=C2,CH=0/20,EQ=1.
*
* NOS/VE DISKS - NO ENTRY NEEDED FOR
* 834, 836, 887 OR 895 DISK TYPES
*
* NOS ACSII PRINTER (580-20)
*
EQ030=LT,EQ=5,CH=12,TN=7.
*
* NOS ISMT TAPE (TURN ON TO USE)
*
EQ040=NT,EQ=0,UN=0,CH=6,TF=IST,ST=OFF.
*
* NOS ATS MAGNETIC TAPE SUBSYSTEM
*
EQ050=NT-2,EQ=0,UN=0,CH=13,TF=ATS.
*
* NOS 2550 (TURN ON TO USE)
*
EQ060=NP,ST=OFF,EQ=7,PI=1,SA=OFF,CH=7,ND=1.
*
* NOS CDCNET DEVICE INTERFACE
*
EQ065=ND,ST=OFF,EQ=0,PI=1,CH=7,ND=64,NT=77.
*
* TWO PORT MUX RDF ENTRY
*
EQ070=RM,ST=OFF,CH=15,PT=1.
*
* MATRIX ALGORITHM PROCESSOR
*
EQ077=MP,ST=OFF,CH=11.
```

```
QPD44
 COPYRIGHT CONTROL DATA 1986, 1987, 1988

  NOS EXTENDED MEMORY

)005=DE,ET=EM,SZ=1000.     NOS UEM ENTRY FOR MACHINES WITH 16 MB OF MEMORY.
M=01,,200.
EMIN.
3R=5.
3AL,S=5.
?=5,F,,,NSVSPF,5.

 NOS SYSTEM DISK

)006=DQ,UN=40,CH=1/2.      885 DISK FOR USE BY NOS
'STEM=6.
.INLOG=6,200.
'=6,F,,,NSVSPF,6.

 NOS PERMANENT FILE DISK

)007=DQ,UN=41,CH=2/1.      885 DISK FOR USE BY NOS
MILY=7.
AL,T=6,7.
=7,F,377,377,NSVSPF,13.

 NOS/VE DISKS - CHOOSE ONE
 TO ELIMINATE AN ENTRY TYPE:
  EQ10=.  TO ELIMINATE EQ10
          OR
  EQ11=.  TO ELIMINATE EQ11

 010=DQ,ST=DOWN,UN=42,CH=1.
 011=DQ,ST=DOWN,UN=43,CH=1.
 MOVE=10,11.

 NOS ACSII PRINTER (580-20)

 )30=LT,EQ=5,CH=12,TN=7.

 NOS ATS MAGNETIC TAPE SUBSYSTEM

 )50=NT-2,EQ=0,UN=0,CH=13,TF=ATS.

 NOS 2550 (TURN ON TO USE)

 )60=NP,ST=OFF,EQ=7,PI=1,SA=OFF,CH=7,ND=1.

 NOS CDCNET DEVICE INTERFACE

 )65=ND,ST=OFF,EQ=0,PI=1,CH=7,ND=64,NT=77.

 TWO PORT MUX RDF ENTRY

 )70=RM,ST=OFF,CH=15,PT=1.

 MATRIX ALGORITHM PROCESSOR

 )77=MP,ST=OFF,CH=11.
```

```
EQPD53
* COPYRIGHT CONTROL DATA 1986, 1987, 1988
*
*  NOS EXTENDED MEMORY
*
EQ005=DE,ET=EM,SZ=2000.     NOS UEM ENTRY FOR MACHINES WITH 32MB OR MORE
XM=01,1000,400.             OF CENTRAL MEMORY
UEMIN.
ASR=5.
MSAL,S=5.
PF=5,F,,,NSVSPF,5.
*
* NOS SYSTEM DISK
*
EQ006=DC,UN=0,CH=1/2.       895 FOR USE BY NOS
SYSTEM=6.
MAINLOG=6,200.
PF=6,F,,,NSVSPF,6.
*
* NOS PERMANENT FILE DISK
*
EQ007=DF,UN=1,CH=2/1.       887 FOR USE BY NOS
FAMILY=7.
MSAL,T=6,7.
PF=7,F,377,377,NSVSPF,13.
*
* NOS/VE DISKS - NO ENTRY NEEDED FOR
* 834, 836, OR 895 DISK TYPES
*
* NOS ACSII PRINTER (580-20)
*
EQ030=LT,EQ=5,CH=12,TN=7.
*
* NOS ATS MAGNETIC TAPE SUBSYSTEM
*
EQ050=NT-2,EQ=0,UN=0,CH=13,TF=ATS.
*
* NOS 2550 (TURN ON TO USE)
*
EQ060=NP,ST=OFF,EQ=7,PI=1,SA=OFF,CH=7,ND=1.
*
* NOS CDCNET DEVICE INTERFACE
*
EQ065=ND,ST=OFF,EQ=0,PI=1,CH=7,ND=64,NT=77.
*
* TWO PORT MUX RDF ENTRY
*
EQ070=RM,ST=OFF,CH=15,PT=1.
*
* MATRIX ALGORITHM PROCESSOR
*
EQ077=MP,ST=OFF,CH=11.
```


er

Installing and Testing Optional RTA Equipment

Use this procedure to install and verify the operation of the optional RTA equipment.

Should any problems arise during this installation and verification, call your CYBER Remote Support Center (CRSC) for sites in the U.S. or your Technical Support office for international sites.

___ 1. Reference the Remote Technical Assistance Handbook to install the RTA.

___ 2. Verify RTA operation within 48 hours after completion of computer system installation by:

___ a. Notifying your CYBER Hardware Support group 24 hours in advance of verification.

___ b. Calling and establishing an RTA data link with your CYBER Hardware Support group.

INTERNAL USE ONLY INTERNAL USE ONLY

W | 06/24/88 09:51:26 | APSM_DP 03/08/88 15:46:35 | 88/06/30 15.33.21 | 60000120 11 | CHECKOL

Glossary A

A

Adrs

C

Central Processing Unit (CPU)

CP-0
Refer to Central Processor.

CP-1
Refer to Central Processor.

E

EMI

exp

F

FCC

Frequency converter
A motor generator mounted within its control cabinet.(from Ron)**

H

Hdr
Header

I

Input/Output Unit (IOU)

M

MG Interface Unit

The electrical box that interfaces with the motor-generator set.**

mux bd

Motor-Generator (MG) Set

A frequency converter and associated control cabinet that converts 3-phase site utility power to 3-phase, 400-Hz power suitable for the mainframe electrical requirements.**

O

Optional IOU Expansion

Optional Standalone IOU

Optional Standalone IOU Expansion

Optl

Optional

P

Power Unit

Provides power to support the electrical systems (logic, environmental, and so on) of the CPU. (The IOU has its own power supply.) The power unit occupies a cabinet that attaches to the CPU.**

R

RTA Modem

S

SIB

Refer to Side Interconnect Board.

SPCP

SPM

System power monitor

System Console

The keyboard and display screen used to monitor and control the operating system.

G | 06/24/88 09:51:26 | APSWLOP 03/08/88 15:45:35 | 88/06/30 15:38:21 | 60000100 11 | G 098APX

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- ☐ Other _____

How do you use this manual?

- ☐ To learn the product or system
- ☐ As a training document
- ☐ To maintain the product or system
- ☐ To troubleshoot the product or system
- ☐ For installation and checkout
- ☐ For quick look-up
- ☐ Other _____

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☐	☐	☐	Is it easy to understand?
☐	☐	☐	Is the order of topics logical?
☐	☐	☐	Can you easily find what you want?
☐	☐	☐	Are there enough examples?
☐	☐	☐	Are the examples helpful? (☐ Too simple? ☐ Too complex?)
☐	☐	☐	Do the illustrations help you?
☐	☐	☐	Is the manual easy to read (print size, page layout, and so on)?
☐	☐	☐	Do you use this manual frequently?

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Check here if you want a reply: ☐

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